

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD  
**ORDER WQ 2006-**

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In the Matter of the Petition of

**WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA, WATER REUSE  
ASSOCIATION, AND COUNTY SANITATION DISTRICTS OF LOS ANGELES  
COUNTY**

For Review of Waste Discharge and Water Recycling Requirements For Alamitos Barrier  
Recycled Water Project, Order No. R4-2005-0061

Issued by the  
California Regional Water Quality Control Board,  
Los Angeles Region  
***SWRCB/OCC FILE A-1719***

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BY THE BOARD:

On September 1, 2005, the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) issued waste discharge and water recycling requirements (Order No. R4-2005-0061 or Permit) for the Alamitos Barrier Recycled Water Project (Project). The Permit was issued to the Los Angeles County Department of Public Works and the Water Replenishment District of Southern California (Dischargers). The Dischargers proposed the Project to facilitate two objectives: to replenish groundwater resources through recharge and reuse, and to prevent seawater intrusion. The Project involves injecting recycled water into the Alamitos Gap Seawater Intrusion Barrier (Barrier). The Barrier prevents seawater intrusion and resupplies the groundwater for beneficial uses, including drinking water. The Barrier has operated since 1964, but has used only imported, potable water for injection. The Project will allow up to 50 per cent of the injected water to be recycled water, thus reducing the use of up to 3 million gallons per day of imported water.

The source water for the Project will be disinfected tertiary wastewater from the Long Beach Water Reclamation Plant, a publicly owned treatment works operated by the Sanitation Districts of Los Angeles County. The water will then be treated at a new Advanced Water Treatment Facility, which will feature advanced water treatment processes, including fine screening, microfiltration, reverse osmosis, ultraviolet irradiation, decarbonation, and pH stabilization. In 2004, the Department of Health Services (DHS) approved the Project. DHS issued Findings of Fact and Conditions, in which it concluded that the treatment processes

constitute the best available treatment technology for recycled water used for groundwater recharge by direct injection. DHS concluded that the Project met its regulatory requirements for groundwater recharge<sup>1</sup> and that it will not degrade the quality of water in the receiving aquifers as a source of domestic water supply, if the Dischargers meet all of DHS' conditions.

Following the Los Angeles Water Board's adoption of the Permit, the Dischargers filed a timely petition for review by the State Water Resources Control Board (State Water Board). The petition challenges a single requirement of the Permit: the application of DHS' "notification levels" as effluent limitations. In this Order, we address only that issue and conclude that it was not appropriate to include "notification levels" as effluent limitations.

## **I. BACKGROUND**

The Permit has detailed requirements and limitations on the Project water that may be injected into the Barrier, including that it be subject to the multiple levels of treatment described above, and that the recycled water must not constitute more than 50% of the injected water. The Permit contains Recycled Water Specifications that specify various effluent limitations, including requirements to meet both primary and secondary maximum contaminant levels (MCLs) established by DHS. In addition, Recycled Water Specification 9 states: "Concentrations of Chemicals of Concern to the Regional Board shall not exceed the limits outlined on Attachment A-7 of this Order." Attachment A-7 is a list of 25 chemicals with limits stated as units for each chemical. Attachment A-7 is identical to DHS' list of Drinking Water Notification Levels, published on its web site, except that six chemicals are omitted from Attachment A-7 and one chemical is added (Diazinon).

The DHS website explains the meaning of its notification levels and how they are to be used.<sup>2</sup> DHS considers these to be health-based advisory levels, and it has published them since the early 1980s.<sup>3</sup> They are used to provide information to public water systems and others about "non-regulated" chemicals in drinking water that lack MCLs. (MCLs are adopted as regulations, and public water systems must comply with certain requirements if MCLs are exceeded.) Chemicals for which notification levels are established may eventually be regulated

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<sup>1</sup> California Code of Regulations, title 22, section 60320.

<sup>2</sup> <http://www.dhs.ca.gov/ps/ddwem/>.

<sup>3</sup> Until 2004, these were called "action levels."

by MCLs (after a formal regulatory process), depending on the extent of contamination, the levels observed, and the risk to human health. Notification levels may be revised to reflect new risk assessment information. The notification levels are calculated using standard risk assessment methods for non-cancer and cancer endpoints, including assuming a 2-liter per day ingestion rate, a 70-kilogram adult body weight, and a 70-year lifetime. DHS considers the notification levels for chemicals that are not considered to be carcinogens to be the “no observed adverse effect level” (NOAEL). For carcinogens, the notification level is considered to pose “de minimis” risk, or a risk of 1 cancer in a population of 1 million people. In some cases, the level of detection using standard analytical methods is higher than the notification level.

DHS explains on its website that notification levels are not regulatory, and therefore public water systems are not required to monitor for the chemicals, although monitoring is recommended. (DHS has proposed draft regulations that would require some recycled water projects to monitor for these chemicals. The Permit contains monitoring requirements that are not at issue.) DHS also states that the notification levels are advisory and not enforceable standards, but that public drinking water systems must notify public agencies (such as city councils) and DHS recommends these systems notify consumers if the notification levels are exceeded in the tap water that is supplied to customers.

## **II. CONTENTION AND FINDINGS**

The Dischargers challenge only the inclusion of notification levels as enforceable effluent limitations in the Permit. The Dischargers claim that the notification levels were not adopted in accordance with law and that use of the levels as effluent limitations is contrary to the public policy of the State of California with respect to the use of recycled water. In our view, the issue before us is solely a policy issue. We have already held that effluent limitations can be based on criteria that have not been adopted as water quality standards, so long as appropriate findings are made.<sup>4</sup>

We agree with the Dischargers that the effluent limitations at issue must be considered in the context of the statewide policies concerning water reclamation. We shall review those policies. First, however, we emphasize the overarching principles of the Porter-

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<sup>4</sup> See, e.g. WQ 95-4 and WQO 2001-16. Thus, we have held that “non-regulatory” limitations may be used to develop effluent limitations where appropriate findings are made. (See, e.g. WQO 2002-0015 (Vacaville) at p. 35 (permit may include limitations based on DHS recommendations).)

Cologne Water Quality Control Act<sup>5</sup> that “activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.”<sup>6</sup> Regulation of water quality must also consider water quantity: “The Legislature finds and declares that the people of the state have a primary interest in the conservation, control, and utilization of the water resources of the state, and that the quality of all the waters of the state shall be protected for use and enjoyment by the people of the state.”<sup>7</sup> The State Water Board must act to prevent waste and unreasonable use of water in this state.<sup>8</sup>

The Porter-Cologne Act includes specific provisions on water reuse. It states the legislative intent that the use of potable domestic water for non-potable uses is a waste or an unreasonable use of the water.<sup>9</sup> Recycled water is recommended for uses including replenishing groundwater basins.<sup>10</sup> This Board has also adopted a Policy encouraging water reclamation, particularly in areas of the state that have water shortages.<sup>11</sup> This Policy provides, in part: “The State Board and the Regional Boards shall (1) encourage reclamation and reuse of water in water-short areas of the State, (2) encourage water conservation measures which further extend the water resources of the State, and (3) encourage other agencies . . . to assist in implementing this policy.”

Historically, the District purchased imported water to supply the Barrier’s recharge operations. The Project will inject a blend of imported and highly treated, recycled water into the Barrier, with the treated water encompassing no more than 50 per cent of the injected water. Thus, the Project will result in significantly less imported potable water being used.<sup>12</sup> Concerning the healthfulness of the injected water, it is subject to extensive treatment,

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<sup>5</sup> Wat. Code, §§ 13000 et seq.

<sup>6</sup> Wat. Code, § 13000.

<sup>7</sup> *Id.*

<sup>8</sup> Wat. Code, § 275.

<sup>9</sup> Wat. Code, § 13550.

<sup>10</sup> Wat. Code, § 13576.

<sup>11</sup> Resolution 77-1.

<sup>12</sup> The amount of imported water replaced will be up to 3 million gallons per day or approximately 3,360 acre feet per year.

blended with imported water, and must, of course, meet all drinking water requirements prior to being pumped up and served to customers. Most significantly, DHS, which is the state agency responsible for drinking water quality, issued its own approval and conditions for this Project and recommended against the use of its notification levels as effluent limitations.

Because of the level of treatment that Dischargers propose, it is likely that the effluent limitations at issue will be met. Nonetheless, the sanctions available for violation of effluent limitations in the Water Code are significant. In light of the fact that this recycling effort will be costly, the additional potential liability for violating the limitations can appropriately be considered in weighing the policy issues before us.<sup>13</sup> We also note that DHS explains that its notification levels are likely to change over time, and that such changes will simply be posted on its web site and not be subject to regulatory action.<sup>14</sup> Such a “moving target” poses practical problems if used as an effluent limitation.

The Los Angeles Water Board relies on the statewide anti-degradation policy<sup>15</sup> to justify the use of notification levels as effluent limitations for the injected water. That policy does allow for some changes in water quality, so long as it will not unreasonably affect beneficial uses of water and the change is consistent with maximum benefit to the people of the state.<sup>16</sup> The Los Angeles Water Board states that the anti-degradation policy does not “require” water quality to be lowered where it is not necessary to do so and that, because it could have replaced the notification levels with “nondetect” limitations, the former are reasonable limitations. We find that the Los Angeles Water Board did not accord ample weight to the public benefits of reclamation and reuse in water-short areas of the state. The replacement of imported potable water with highly treated reclaimed water is strongly encouraged. The public health is clearly being protected, especially where DHS has fully approved the project and has, itself, discouraged the use of notification levels as effluent limitations<sup>17</sup>. We share the Los

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<sup>13</sup> This Order considers the policies favoring recycling and reuse of water where potable water would otherwise be used. Thus, the precedent established here is limited to similar recycling projects. We do not here decide whether notification levels, in general, may be applied as effluent limitations in permits.

<sup>14</sup> The notification levels may also be replaced with MCLs, which are adopted as regulations. Both DHS and the Los Angeles Water Board require compliance with MCLs and the Dischargers do not challenge those requirements.

<sup>15</sup> State Water Board Resolution 68-16, available at <http://www.waterboards.ca.gov/resdec/resltn/other/rs68-16.pdf>.

<sup>16</sup> *Id.*

<sup>17</sup> Email from Kurt Souza of DHS, dated June 15, 2005.

Angeles Water Board's concerns about anthropogenic compounds being discharged into drinking water supplies, but here the public water supplies are fully protected by the highest levels of treatment available, the reclaimed water is then diluted, the compounds are monitored, and there will likely be further reductions prior to serving the water to customers. The public benefit of reclamation and reuse outweighs the possibility that such stringent effluent limitations might discourage proponents from undertaking this or similar projects.

The Los Angeles Water Board also points to its Basin Plan<sup>18</sup> to support its use of notification levels as effluent limitations. Specifically, the water quality objectives include the following statement: "Ground waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use."<sup>19</sup> The Board explains that, based on the scientific findings described by DHS in setting the notification levels, these levels are necessary to protect public health. The Los Angeles Water Board explains that it is using DHS' scientific statements while dismissing DHS' recommendations for how to apply these levels. In WQO 2005-0007 (Olin Corporation) we stated: "The Water Boards should defer to [Office of Environmental Health Hazard Assessment] and DHS in determining the appropriate level of contamination" at which to require the replacement of a source of drinking water. (WQO 2005-0007 at 5.) While there may be instances where it is appropriate to require non-detection or notification levels in permits, we do not agree that concentrations of chemicals above notification levels will violate the water quality objective that requires that there be no chemical constituents in amounts that adversely affect municipal use of the ground waters. It is especially appropriate in this case, where policy considerations favor the reclamation project, to follow DHS recommendations on the appropriate use of its notification levels.

### **III. CONCLUSION**

Based on the policies favoring reclamation and reuse of water, it was inappropriate for the Los Angeles Water Board to include DHS' notification levels as effluent limitations in the water reclamation and waste discharge requirements for the Alamitos Barrier Recycled Water Project.

### **IV. ORDER**

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<sup>18</sup> Los Angeles Water Quality Control Plan.

<sup>19</sup> *Id.* at page 3-18.

# **D R A F T**

February 7, 2006

IT IS HEREBY ORDERED that Waste Discharge and Water Recycling Requirements for Alamitos Barrier Recycled Water Project, Order No. R4-2005-0061 are revised as follows:

1. Finding 23, paragraph D is deleted; and
2. Recycled Water Specification III.9 is deleted.

## **CERTIFICATION**

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 5, 2006.

AYE:

NO:

ABSENT:

ABSTAIN:

**DRAFT**

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Song Her  
Clerk to the Board